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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/991,973

11/26/2001

Hye-Dong Kim

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5327

7590

09/23/2004

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EXAMINER

SEFER, AHMED N

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/991,973

**Applicant(s)**

KIM ET AL.

**Examiner**

A. Sefer

**Art Unit**

2826



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-5 and 9-24 is/are pending in the application.
- 4a) Of the above claim(s) 13-24 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-12 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/6/04 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swirbel USPN 6,091,194 in view of Urabe et al. ("Urabe") USPN 6,614,174 and Yamazaki et al. US PG-Pub 2004/0132233 ("Yamazaki '233").

Swirbel discloses in figs. 1-4 an organic EL device, comprising a thin film transistor (TFT) array substrate including a first insulating substrate 20, a TFT 24 with a conductive interface pad 46 connected thereto; and an organic EL substrate including a second insulating substrate 30, a transparent electrode 32, an organic EL layer 40 and a metal electrode 44, wherein the conductive interface pad is directly connected to the metal electrode, but does not specifically disclose a capacitor formed on the first insulating substrate, a buffer layer on the insulating substrate or a planarization layer with a hole on the TFT.

Urabe discloses in figs. 1 and 5 an organic EL device, comprising a thin film transistor (TFT) array substrate including a capacitor Cs formed on a TFT substrate.

Yamazaki '233 discloses (fig. 12 and par. 0284) an organic EL device, comprising a thin film transistor (TFT) including a first insulating substrate 300, a buffer layer 301 on the insulating substrate, and a gate electrode and source/drain electrodes on the buffer layer; and a planarization layer 306 with a hole on the TFT.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Urabe's teachings with Swirbel's device since that would cause the organic electro-luminescent element to keep emitting light at the brightness in accordance with the amount of current supplied from the thin film transistor(s) as taught by Urabe. It would have been obvious to incorporate the teachings of Yamazaki '233 since that would provide a semiconductor film with a very high crystallinity and a sufficient flatness.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swirbel USPN 6,091,194 in view of Yamazaki et al. US PG-Pub 2004/0135146 ("Yamazaki '146").

Swirbel discloses in figs. 1-4 an organic EL device, comprising a thin film transistor (TFT) array substrate including a first insulating substrate 20, a TFT 24 with a conductive interface pad 46 connected thereto; and an organic EL substrate including a second insulating substrate 30, a transparent electrode 32, an organic EL layer 40 and a metal electrode 44, wherein the conductive interface pad is directly connected to the metal electrode, but does not specifically disclose a capacitor formed on the first insulating substrate, a buffer layer on the insulating substrate or a planarization layer with a hole.

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Yamazaki '146 discloses in figs. 2 and 9 an organic EL device, comprising a thin film transistor (TFT) array substrate including an insulating substrate 11; a capacitor 204 formed on a TFT substrate, a buffer layer 12 on the insulating substrate, and a gate electrode and source/drain electrodes on the buffer layer; and a planarization layer 39 with a hole on the TFT.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate the teachings of Yamazaki '146 since that would provide a semiconductor film with a very high crystallinity and a sufficient flatness.

5. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swirbel in view of view of Urabe and Yamazaki '233 as applied to claim 1 above, and further in view of Codama USPN 6,091,196.

The combined references disclose the device structure as recited in the claim, but fail to specifically disclose a protection film.

Codama discloses (see col. 3, lines 25-42) a protection film that prevents external oxygen and moisture from permeating.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Codama's teachings since that would provide the needed device protection.

As to claim 4, Codama discloses (see col. 13, lines 1-4) SiNx layer and a SiO.sub.2. As to the said protection film being formed by depositing a SiNx layer and a SiO.sub.2 layer at least once refers to a process and "product by process" claims are directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685 and In re Thorpe, 227 USPQ 964, 966. Therefore, the way the product was

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made does not carry any patentable weight as long as the claims are directed to a device.

Further, note that the applicant has the burden of proof in such cases, as the above case law makes clear. Also see MPEP 2113.

As to claim 5, Codama discloses (see col. 10, lines 54-67 and col. 13, lines 15-30) a UV-curable agent sealant.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swirbel in view of Yamazaki '146 as applied to claim 1 above, and further in view of Kuribayashi et al. ("Kuribayashi") USPN 6,175,345.

The combined references disclose the device structure as recited in the claim, but fail to disclose a protection film.

Kuribayashi discloses (see col. 9, lines 27-49) a protection film that prevents external oxygen and moisture from permeating.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate Kuribayashi's teachings since that would provide the needed device protection.

As to claim 4, said protection film being formed by depositing a SiNx layer and a SiO.sub.2 layer at least once refers to a process and "product by process" claims are directed to the product per se, no matter how actually made, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See also In re Brown, 173 USPQ 685 and In re Thorpe, 227 USPQ 964, 966. Therefore, the way the product was made does not carry any patentable weight as long as the claims are directed to a device. Further, note that the applicant has the burden of proof in such cases, as the above case law makes clear. Also see MPEP 2113.

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*Allowable Subject Matter*

7. Claims 9-12 are allowed.

NATHAN J. FLYNN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ANS  
September 16, 2004